

## CLAIMS

1. (Amended) A discharging surface treatment method for generating a discharge between an electrode and a treatment target so that a hard coat film is formed on the surface of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance or a combination of a plurality of carbides of metals belonging to the IVa, Va and VIa families in the Periodic Table is mixed with a ferrous-family metal powder or non-ferrous metal powder having the same composition as the treatment target as a simple substance or a combination of a plurality of metals, and this is compressed and molded, and then burned at a temperature at which the ferrous-family or non-ferrous metal powder starts to elute to form an electrode serving as a discharge processing electrode, and

electrical conditions at the time when the base member of the treatment target is directly subjected to a discharging surface treatment and the electrical conditions at the time when a hard coat film that has been formed is subjected to a discharging surface treatment are altered according to the characteristics of the treatment target material.

2. (Amended) A discharging surface treatment method for generating a discharge between an electrode and a treatment target so that a hard coat film is formed on the surface

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of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance  
or a combination of a plurality of carbides of metals belonging  
to the IVa, Va and VIa families in the Periodic Table is  
5 mixed with a ferrous-family metal powder or non-ferrous metal  
powder having the same composition as the treatment target  
as a simple substance or a combination of a plurality of  
metals, and this is compressed and molded, and then burned  
10 metal powder starts to elute to form an electrode serving  
as a discharge processing electrode, and

electrical conditions at the time when a hard coat film  
that has been formed is subjected to a discharging surface  
treatment are altered at least once according to the  
15 characteristics of the treatment target material.

3. (Amended) A discharging surface treatment method for  
generating a discharge between an electrode and a treatment  
target so that a hard coat film is formed on the surface  
20 of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance  
or a combination of a plurality of carbides of metals belonging  
to the IVa, Va and VIa families in the Periodic Table is  
mixed with a ferrous-family metal powder or non-ferrous metal  
25 powder having the same composition as the treatment target

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as a simple substance or a combination of a plurality of metals, and this is compressed and molded, and then burned at a temperature at which the ferrous-family or non-ferrous metal powder starts to elute to form an electrode serving  
5 as a discharge processing electrode, and

electrical conditions at the time when the base member of the treatment target is directly subjected to a discharging surface treatment and the electrical conditions at the time when a hard coat film that has been formed is subjected to  
10 a discharging surface treatment are altered according to the characteristics of the treatment target material, while the electrical conditions at the time when the hard coat film that has been formed is subjected to a discharging surface treatment are altered at least once according to the  
15 characteristics of the treatment target material.

4. (Amended) The discharging surface treatment method according to claim 1, wherein an inert gas is interpolated between the discharge processing electrode and the treatment  
20 target.

5. (Amended) The discharging surface treatment method according to claim 2, wherein an inert gas is interpolated between the discharge processing electrode and the treatment  
25 target.

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6. (Amended) The discharging surface treatment method according to claim 3, wherein an inert gas is interpolated between the discharge processing electrode and the treatment  
5 target.

7. (Amended) The discharging surface treatment method according to claim 1, wherein the discharge processing electrode is allowed to scan the treatment target so that  
10 the hard coat film is formed on the surface of the treatment target.

8. (Amended) The discharging surface treatment method according to claim 2, wherein the discharge processing  
15 electrode is allowed to scan the treatment target so that the hard coat film is formed on the surface of the treatment target.

9. (Amended) The discharging surface treatment method  
20 according to claim 3, wherein the discharge processing electrode is allowed to scan the treatment target so that the hard coat film is formed on the surface of the treatment target.

25 10. (Amended) A discharging surface treatment device for

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generating a discharge between an electrode and a treatment target so that a hard coat film is formed on the surface of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance  
5 or a combination of a plurality of carbides of metals belonging to the IVa, Va and VIa families in the Periodic Table is mixed with a ferrous-family metal powder or non-ferrous metal powder having the same composition as the treatment target as a simple substance or a combination of a plurality of  
10 metals, and this is compressed and molded, and then burned at a temperature at which the ferrous-family or non-ferrous metal powder starts to elute to form an electrode serving as a discharge processing electrode, and

said discharging surface treatment device is provided  
15 with a switching unit which alters the electrical conditions at the time when the base member of the treatment target is directly subjected to a discharging surface treatment and the electrical conditions at the time when a hard coat film that has been formed is subjected to a discharging surface  
20 treatment according to the characteristics of the treatment target material.

11. (Amended) A discharging surface treatment device for  
generating a discharge between an electrode and a treatment  
25 target so that a hard coat film is formed on the surface

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of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance  
or a combination of a plurality of carbides of metals belonging  
to the IVa, Va and VIa families in the Periodic Table is  
5 mixed with a ferrous-family metal powder or non-ferrous metal  
powder having the same composition as the treatment target  
as a simple substance or a combination of a plurality of  
metals, and this is compressed and molded, and then burned  
at a temperature at which the ferrous-family or non-ferrous  
10 metal powder starts to elute to form an electrode serving  
as a discharge processing electrode, and

said discharging surface treatment device is provided  
with a switching unit which alters the electrical conditions  
at the time when a hard coat film that has been formed is  
15 subjected to a discharging surface treatment at least once  
according to the characteristics of the treatment target  
material.

12. (Amended) A discharging surface treatment device for  
20 generating a discharge between an electrode and a treatment  
target so that a hard coat film is formed on the surface  
of the treatment target by the discharging energy,

wherein a powder that is formed by a simple substance  
or a combination of a plurality of carbides of metals belonging  
25 to the IVa, Va and VIa families in the Periodic Table is

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mixed with a ferrous-family metal powder or non-ferrous metal powder having the same composition as the treatment target as a simple substance or a combination of a plurality of metals, and this is compressed and molded, and then burned  
5 at a temperature at which the ferrous-family or non-ferrous metal powder starts to elute to form an electrode serving as a discharge processing electrode, and

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said discharging surface treatment device is provided with a first switching unit which alters the electrical  
10 conditions at the time when the base member of the treatment target is directly subjected to a discharging surface treatment and the electrical conditions at the time when a hard coat film that has been formed is subjected to a discharging surface treatment according to the  
15 characteristics of the treatment target material, and a second switching unit which alters the electrical conditions at the time when the hard coat film that has been formed is subjected to a discharging surface treatment at least once according to the characteristics of the treatment target  
20 material.

13. (Amended) The discharging surface treatment device according to claim 10, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the  
25 discharge processing electrode and the treatment target.

14. (Amended) The discharging surface treatment device according to claim 11, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the discharge processing electrode and the treatment target.

15. (Amended) The discharging surface treatment device according to claim 12, wherein an inert-gas supplying unit is installed so as to interpolate an inert gas between the discharge processing electrode and the treatment target.

16. (Amended) The discharging surface treatment device according to claim 10, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device, the Y-axis driving device and the Z-axis driving device allow the discharge processing electrode to scan the treatment target to form the hard coat film on the surface of the treatment target.

17. (Amended) The discharging surface treatment device according to claim 11, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which

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relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device, the Y-axis driving device and the Z-axis driving device allow  
5 the discharge processing electrode to scan the treatment target to form the hard coat film on the surface of the treatment target.

18. (Amended) The discharging surface treatment device  
10 according to claim 12, wherein an X-axis driving device, a Y-axis driving device and a Z-axis driving device, which relatively shift the discharge processing electrode and the treatment target in the X-direction, Y-direction and Z-direction, are installed so that the X-axis driving device,  
15 the Y-axis driving device and the Z-axis driving device allow the discharge processing electrode to scan the treatment target to form the hard coat film on the surface of the treatment target.

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